# Research Activity Report Supported by "Leading Graduate Program in Primatology and Wildlife Science"

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### 1. Country/location of visit

Japan, Kyoto University.

## 2. Research project

Study on Japanese macaques' diet through DNA analysis.

#### 3. Date

2014. 06. 01 - 2014. 06. 05

#### 4. Main host researcher and affiliation

Prof. Shiro Kohshima, Wildlife Research Centre of Kyoto University.

## 5. Progress and results of your research/activity(You can attach extra pages if needed)

Please insert one or more pictures (to be publicly released). Below each picture, please provide a brief description.

### **Genome Training Course**

Basing on one of our field conclusion that, the Japanese Monkeys were seen eating insects of which their identification is difficult in the field through direct observation, it was scheduled to attend genome course for the sake of coming out with the outstanding results.

The genome course was held at Kyoto University just after coming back from the field site (Yakushima Island) where we collected various samples (DNA samples from Monkeys' fresh feces and insects sampled by the insect team). The training commenced from 1<sup>st</sup> June to 5<sup>th</sup> June and it was provided depending on the understanding and experience of the participants. To my case I attended the genome training course which concerned with insect metagenome (special for beginners).

The aim was to extract DNA sequences from insects through Sanger Direct Sequencing (SDS) which later, the sequences were to be compared with the DNA sequences extracted from the inside of fresh feces dropped by monkeys through the use of Next Generation Sequencing (NGS).





Photo 1: Vortexing in the course of DNA extraction from insects

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When the results from insect by SDS and monkey feces by NGS were compared, only one sequence matched for 99.7%. Also, from monkey feces it was revealed that Japanese monkeys eat insects mostly from the order; Lepidoptera, Orthoptera, Coleoptera, Hemiptera and Hymenoptera.

This was my first time to attend a course like this. I used to learn theoretically without real experimentation. Though the study was a bit difficult at a first place as most of the things were new to me, but I enjoyed the course because slowly I started to understand and cope with others.

Through this course, I came to understand that DNA analysis is very useful at settling the food items (diet) that are actually eaten by animals in the field but not easy to observe and identify.

On the other hand, the use of statistical software in analyzing data has been of remarkable assist in my future studies.

#### 6. Others

I was very impressed with the Japanese life style. It is good and adorable. One thing which was very impressing is how the instructors interact with their students during training.



Photo 2: Group photo for the insect metagenome course participants.

It's my pleasure to extend my gratitude to the course organizers (WRC-Kyoto University), the field instructors (Professors and Doctors) and all other facilitators in the genome training course.

I would like also to thank all the participants of this course for constructive discussion, friendship, and the good time we all experienced from the first moment of our interaction. Thank you all.

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